

Loxocrambus mohaviellus new species.

Similar to *L. canellus*, but noticeably darker and slightly larger.

Pearl gray, shaded with ochreous brown, especially above the anal vein out to the post-medial line, and along the costal edge beyond. Head pearl gray, much darker than *L. canellus*; the palpi darker on the outer side. Disc of thorax concolorous, the sides of the collar and tegulae darker and browner gray. Fore wing dull ochreous, as far as the post-medial line, the costal edge and inner margin below vein A pearl gray. A streak of blackish and white dusting between Sc and R, and more diffuse streaks in outer part of cell, below Cu and above and below A. A strong white streak along Cu. Post-medial line whitish followed by brown the brown darkening into black dots opposite end of cell and on Cu; the line obscure below Cu₂ in the type, and wholly obscure in the paratype. Post-medial region pearl gray, streaked with white on the veins, except A, and on the lower interspaces. St. line deep brown, followed with white. Terminal space pale pearl gray, less yellowish than in the post-medial region, shading into pale brown at costa, and straw yellow along dorsal part of outer margin. Two terminal dots, located as in *L. canellus*. Terminal line in base of fringe black on costa, obsolete below. Fringe light, with a black line in outer part, and white scale-tips. Hind wing and legs pearl gray. Under side pearl gray, terminal dots as above, and lines in fringe brown. 20 mm. Victorville (Mohave River), Cal., April 30, 1918, at light in the town. Type and paratype male Cornell U., No. 468.

MISCELLANEOUS NOTES AND RECORDS OF LOCAL LEPIDOPTERA, WITH THE DESCRIPTION OF A NEW FORM.¹

BY FRANK E. WATSON,

NEW YORK, N. Y.

The following records were taken, unless otherwise stated, from my collecting notes, in the belief that they will be of use for state and local lists and it is hoped that they will prove of interest as well. I have also included the more interesting observations which were made while on an automobile trip, through New Jersey and Pennsylvania, during July, 1917, as a guest of Mr. G. C. Hall. These notes are enclosed in brackets and Mr. Hall should be credited with the writer for them.

¹ Read, in part, before the New York Entomological Society.

Papilio cresphontes Cramer.

One larva, about ready to pupate, found on gas-plant or burning-bush, *Dictamnus albus* Linné, in a garden at Waterbury, Ct., was received at the Museum, together with a specimen of the food-plant, for determination. Coll. Amer. Mus. Nat. Hist.

This garden-plant is a variable species of the Rue family (Rutaceæ) and occurs from southern Europe to northern China. It has a strong odor of lemon and will give off a flash of light on sultry summer evenings when a lighted match is held under the flower-cluster near the main stem.²

The above plant seems to be fairly well known as a food plant of *cresphontes*.

Pieris protodice f. **vern. vernalis** Edwards.

One specimen captured at Lakewood, Ocean Co., N. J., on April 26, 1906. Coll. F. E. W.

Pieris rapæ (Linné).

One pupa found during the latter part of August, 1908, attached to the underside of a leaflet of *Cassia marylandica*. I raised this plant from seed in a large flower-pot on my roof and it was the only plant there. The leaves were well chewed near the pupa, and there were no other larvæ to be found, so that the *rapæ* caterpillar must have fed on the *Cassia*, a female in flying over the roof having deposited an egg on it. A normal female subsequently emerged. This is rather a strange food for *rapæ*. Locality, Morrisania, New York City. Coll. F. E. W.

Eurymus philodice (Godart).

One nearly full-grown larva was found by W. A. Friedle on a young plant of *Robinia pseudacacia* at Washington Heights, New York City, September 14, 1916. It continued to feed on this plant until fully grown, making a crippled pupa from which the adult failed to emerge.

Danaus archippus (Fabricius).

About 5 P. M. on July 14, 1907, while returning from a collecting trip to Lakehurst,³ I found near South Lakewood,³ four nearly

² Botanical notes by J. B. Keller in L. H. Bailey's Standard Cyclopedia of Horticulture, Vol. II, 1914, p. 1004.

³ Both towns are in Ocean County, N. J.

full grown larvæ on a large bushy plant of *Asclepias tuberosa*. Number one was resting on the underside of a leaf. Number two was eating the flowers of a small cluster which projected horizontally from the inflorescence. The larva held on to the main stalk just below the flowers with its fourth and anal pairs of prolegs and was able to reach the flowers. It assumed a horizontal position but with the anterior segments arched backward and partly downward. Number three, on another stalk, was chewing the stem just beneath the flower cluster. Number four was feeding on the flowers of still another cluster. It held on to the stalk in the same manner as number two, with its anterior segments arched backward and downward. The flower cluster upon which this larva was feeding was hanging down; the peduncle had been chewed partly through, a very wide V-shaped portion of the stalk having been eaten out. A number of other flower-heads on various plants of *A. tuberosa* were observed hanging downward with their stems partly cut through.

Do the larvæ cut the stems so as to assume a comfortable position when feeding, *i.e.*, to bring the food within easy reach, or does the attitude when feeding on the cut flower-heads offer some protection? As the larvæ when feeding as described above were directly beneath the inflorescence, they were somewhat sheltered from the sun.

I have not noticed any published notes of *archippus* larvæ in the last instar feeding on milkweed flowers, although young larvæ have been recorded as so feeding and eggs have also been found among the flowers. As a matter of fact, I have a number of times found both eggs and young larvæ on the buds and flowers of various species of *Asclepias*.

Early and late records for the imago: one specimen seen flying near the Amer. Mus. Nat. Hist., on October 2, 1916; a second specimen was observed at the same place, flying during a light shower, on April 23, 1917.

Neonympha phocion (Fabricius).

[One fresh individual captured at Richland, Atlantic Co., N. J., July 17, 1917.]

Euphydryas phaëton (Drury).

[Common at Cape May Court House, N. J., July 16, 1917.]

Polygonia progne (Cramer).

Although this species occurs in two forms, a summer and a winter or hibernating form, only the above name has heretofore appeared in our local lists. Form *progne* (Cramer) is here applied to the late summer or autumn brood and from *l-argenteum* Scudder to the early summer generation. With a view to adding the form *l-argenteum* Scudder to our local lists, the following records are offered. All the material is in my local collection and was collected by me unless otherwise stated.

f. aut. **progne** (Cramer).

April 20, '02, one specimen, Hemlock Falls, Essex Co., N. J.;

July 24, '10, two specimens, Fort Montgomery, Orange Co., N. Y.;

July 31, '04, one very old specimen, Van Cortlandt Park, New York City, N. Y.;

August 2, '03, one specimen, Sloatsburg, Orange Co., N. Y.;

August 30, '08, one specimen, Andover, Sussex Co., N. J.;

September 8, '10, one specimen, Big Island, Orange Co., N. Y. (Dr. F. E. Lutz), Coll. Amer. Mus. Nat. Hist.;

September 20, '14, one specimen, Pine Island, Orange Co., N. Y., Coll. Amer. Mus. Nat. Hist.

September 21, '10, one specimen, Woodbury Falls, Orange Co., N. Y. (Dr. F. E. Lutz), Coll. Amer. Mus. Nat. Hist.;

October 11, '18, one fresh female, Van Cortlandt Park, New York City, N. Y. (A. B. Klots), Coll. A. B. Klots.

f. æst. **l-argenteum** Scudder.

June 24, '06, one specimen, Fort Montgomery, Orange Co., N. Y.;

July 1, '06, five specimens, from last mentioned locality, one of which was collected by G. C. Hall and is in his collection;

July 1 and 2, '09, one specimen each date, Greenwood Lake Glens, Passaic Co., N. J.;

July 3, '03, one specimen, Sloatsburg, Orange Co., N. Y.;

July 4, '05 and '06, one specimen each date, Fort Montgomery, Orange Co., N. Y.

Aglais milberti (Godart).

One specimen seen near the Amer. Mus. Nat. Hist. on October 26, 1916. One individual observed at Washington Heights, New

York City, on March 29, 1918. [Young larvæ rather common on *Urtica gracilis* at Mashipacong Pond, Sussex Co., N. J., July 18, 1917.]

Aglais antiopa ab. **hygiæa** (Heydenreich).

On September 21, 1907, a colony of about seventy-five larvæ were collected on a *Populus deltoides* which was growing in a street near my home in Morrisania, New York City. The larvæ were on their mats of silk and about ready to moult for the fourth time. As elm could be more easily procured, it was provided and the larvæ, after moulting, ate it readily. About fifty pupæ were obtained, which I divided equally with Mr. Harvey Mitchell of Westwood, N. J. All of the specimens from my lot, some of which emerged as late as November 6, were of the typical form. From Mr. Mitchell's portion, two *hygiæa* and six transitional specimens emerged on October 28. Coll. F. E. W.

Mr. Mitchell's lot of pupæ were not sent through the mails but carried by him to his home in Westwood. They had been placed by me in a tin box between layers of cotton and travelled, in this manner, thirty-five miles by rail. All pupæ were kept indoors and were not subjected to any abnormal conditions. Was the jarring in transit the cause which produced the aberrant specimens? I have heard this explanation given but do not suggest it myself.

Chlorippe clyton f. **proserpina** (Scudder).

This form has not heretofore appeared in any of our local lists although the typical form, *clyton* (Boisduval and Le Conte) is not uncommon in the vicinity of Maplewood, Essex Co., N. J., and has been recorded in *The Insects of New Jersey*, Report of the New Jersey State Museum, 1909, p. 412. The form *proserpina* (Scudder) is relatively scarce and seems to be confined largely to the females. In a very large bred series, in my local collection, there are only five males and thirteen females. Transitional specimens occur. The emergence dates average from June 15 to July 15, extremes being June 14 and August 20.

Heodes epixanthe (Boisduval and LeConte).

[Extremely abundant in a cranberry bog near Toms River, Ocean Co., N. J., July 15, 1917. Most of the specimens were old and worn, but a few were freshly emerged.]

Achalarus lycidas (Smith and Abbot).

[One individual observed at Richhill. Bucks Co., Pa., July 17, 1917.]

Polites manataaqua (Scudder).

[One specimen taken at Palermo, Cape May Co., N. J., and a second one at West Cape May, N. J., July 16, 1917.]

Poanes massasoit (Scudder).

[One male, of the typical form, and one female, transitional to the form *suffusa* (Laurent), both in fresh condition, were captured at Malaga, Gloucester Co., N. J., July 17, 1917.] Coll. Amer. Mus. Nat. Hist.

f. *suffusa* (Laurent).

[One male and one female, both fresh, were taken at Malaga, Gloucester Co., N. J., July 17, 1917.] Male in collection G. C. Hall; female in collection Amer. Mus. Nat. Hist.

Poanes hobomok f. ♀ *pocahontas* ab. *friedlei*, new aberration.

This aberration differs from typical *pocahontas* (Scudder) in the obsolescence of the white markings, particularly on the upper side which is almost immaculate. Primaries, above, with only three subapical spots present and much smaller than in normal specimens. The band of white spots on the outer third of the wing has almost completely disappeared, the spots being barely indicated by a few diffused whitish scales. There is also a small whitish spot in the apical angle of the cell. Secondaries, above, immaculate. Primaries, below, with the spots repeated, and relatively strong and distinct but greatly reduced from those present in normal individuals. A second small spot here appears below the first near the distal end of the cell. Bluish gray marginal border also reduced. Secondaries with the pale wide central band barely discernable owing to the lack of the pale scaling generally present in normal individuals. The pale spot near the base between veins 7 and 8 can scarcely be made out. Bluish gray marginal border greatly reduced. Specimen somewhat undersized, expanding 36 mm.⁴

Holotype female, Van Cortlandt Park, New York City, N. Y., Sept. 10, 1906, from the author's collection, now in the Amer. Mus. Nat. Hist. Named for my friend Mr. Wm. A. Friedle.

The above specimen is one of two which I bred from eggs deposited by a female *hobomok* (Harris) captured in Van Cortlandt Park

⁴ Measurements were taken from the center of thorax to each apex and added.

during the early summer of 1906. The larvæ and pupæ were kept in a cool damp cellar and despite the fact that in this vicinity there is but one generation a year, the two pupæ obtained produced a male *hobomok* and the aberrant female *pocahontas* (named above) during September of the same season. The male, which emerged on September 11, is slightly undersized and somewhat darker than average specimens of *hobomok* (Harris). Male in author's collection.

Euphyes conspicua (Edwards).

[One male and two females, all in fresh condition, Malaga, Gloucester Co., N. J., July 17, 1917.]

Megistias fusca (Grote and Robinson).

[One old specimen taken at Cape May Court House, N. J., July 17, 1917.]

Prenes panoquin (Seudder).

[One specimen collected at Palermo, Cape May Co., N. J., and another at Cape May Court House, N. J., July 17, 1917.]

Samia cecropia (Linné).

On September 7, 1916, at Washington Heights, New York City, a nearly full-grown *cecropia* larva was noticed on a wild cherry bush with a Tachinid fly, *Winthemia quadripustulata* (Fabricius),⁵ sitting near by. The fly assumed a position on a leaf at right angles to the larva, its head not quite touching it. It then bent its posterior abdominal segments downward and forward and extended its exceedingly long flexible ovipositor beneath its abdomen, forward and upward to the level of the top of its head, or slightly higher and thence to the dorsal region of the posterior segments of the larva, in this instance, and deposited the egg. A number of eggs were thus laid before capturing the fly. Previously to the above observation, a fly, probably this one, had deposited eggs on the lateral regions of the anterior segments. The larva was well covered with eggs, numerous old ones having hatched, black spots showing on the larva at the ends of the eggs where the Tachinid larvæ had bored into the caterpillar.

Three eggs laid this date about 12 o'clock noon, were left on the

⁵ Determined by Dr. J. Bequaert.

larva, others were put into a bottle. In both groups, eggs began to hatch on the 9th about 9 A.M. The egg period is therefore about two days.

The *cecropia* did not eat after the 8th and began to decrease in size. It died on the 13th, finally turning black.

Full grown larvæ were seen emerging on the 25th and kept on emerging during the 26th and 27th. On the evening of the 28th, four large larvæ could be seen in the remains together with numerous small larvæ, these latter perhaps belonging to another species. Some of the large larvæ formed pupæ from which the adults failed to emerge. Coll. Amer. Mus. Nat. Hist.

Tropæa luna (Linné).

One nearly full grown larva was found on hickory, September 23, 1916, at Pearl River, Rockland Co., N. Y. On April 9, 1917, a rather undersized female of the normal form emerged, not spring form *rubromarginata* Davis. Mr. Davis suggests that the above is due to the pupa having been kept in the house, *i.e.*, under artificial conditions. The cocoon was, however, kept in a wire breeding-cage and in a very cold room. Coll. Amer. Mus. Nat. Hist.

Macronoctua onusta Grote.

In June, 1917, we received at the Museum, several young larvæ and their workings in cultivated *Iris*. These were collected by Mr. R. G. Van Name in his garden at New Haven, Conn., where they are very destructive to his *Iris*. Early in September, Mr. Van Name dug up several pupæ from his *Iris* bed and sent them to us. One imago emerged on September 20 and three on September 21. Coll. Amer. Mus. Nat. Hist.

Phobetron pithecium (Smith and Abbot).

On the afternoon of September 23, 1916, one nearly full-grown larva was collected on white oak at Pearl River, Rockland Co., N. Y. A twig of the oak with the larva was placed in a satchel as I had no receptacle for larvæ with me. A twig of hickory with a larva of *Tropæa luna* (Linné) was then placed on top of the oak. About one hour later I looked into the satchel to see how the larvæ were getting along and found that the *pithecium* had, of its own accord, left the

oak and was eating the hickory. It continued to feed on the hickory until the morning of the 25th, when I transferred the larvæ to glass jars. The *pithecium* was given the white oak, on which it fed until full-grown, spinning a normal cocoon.

WINTER COLLECTING NOTES ON FLORIDA RHOPALOCERA.

BY E. L. BELL,

FLUSHING, N. Y.

Under this heading is given a short account of the experiences of three amateurs during their visit to Florida during the winter, from about the middle of January, 1920, to the latter part of March, of the same year.

My father, mother, and sister, none of whom had had any previous experience in collecting insects spent the time mentioned at Tampa, Florida, excepting about two weeks spent at Dade City, a small place some forty miles northeast of Tampa. Tampa is, of course, the well-known city on the west coast of Florida about 250 miles on the railroad, southwest of Jacksonville, Florida. Before starting their trip I gave them instructions in collecting and pinning the insects, and supplied them with nets, cyanide jars, pins, cork-lined boxes, etc., and with some anxiety awaited the outcome, for insects collected by those who have had no experience whatever are not apt to arrive in the "pink" of condition. They collected for me approximately 400 butterflies, and I was very agreeably surprised at the generally fine condition of the insects received.

The collecting during the latter part of January was generally pretty fair, and during the first part of February, excepting for some cool spells lasting from one to two or three days, the collecting was even better, but towards the end of this month and the first part of March a very cold period, lasting about two weeks or a little more, put an effectual end to the collecting. After the cold period had ended and the days became quite warm again the best collecting of all was had. The weather was generally fine, with very little rain,